

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1-25. (canceled).

26. (withdrawn) A method for producing hydrophobic polyolefin-containing fibres or filaments, the method comprising the following steps:

- a. melt spinning a polyolefin-containing material to produce spun filaments,
- b. applying to the spun filaments a first spin finish with an active ingredient content comprising 20-100% by weight of at least one water-insoluble ester of a mono-, di, tri- or tetrahydric alcohol with a molecular weight not exceeding 500 and a branched or straight chain fatty acid with between 12 and 30 carbon atoms,
- c. stretching the filaments,
- d. applying to the stretched filaments a second spin finish with an active ingredient content comprising 20-100% by weight of at least one water-insoluble ester of a mono-, di-, tri- or tetrahydric alcohol with a molecular weight not exceeding 500 and a

branched or straight chain fatty acid with between 12 and 30 carbon atoms,

- e. optionally, crimping the filaments,
- f. applying, during the spinning stage, the stretching stage or after crimping, an antistatic agent,
- g. drying the filaments, and
- h. for the production of fibres, cutting the filaments to obtain staple fibres.

27. (withdrawn) A method according to claim 26, wherein the fibres or filaments are cardable staple fibres.

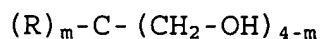
28. (withdrawn) A method according to claim 26, wherein the polyolefin-containing material is polypropylene, polyethylene or a copolymer thereof.

29. (withdrawn) A method according to claim 26, wherein the melt spinning is performed so that the melt flow rate of the spun filaments is between 1.5 and 7 times the initial MFR of the polyolefin-containing material before spinning as measured according to ISO 1133.

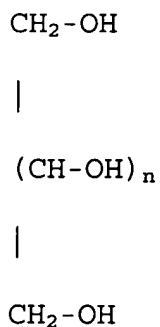
30. (withdrawn) A method according to claim 26, wherein the active ingredient content of the first and/or second spin finish

comprises up to 80% by weight of a mineral oil and up to 10% by weight of an ethoxylated alcohol.

31. (withdrawn) A method according to claim 26, wherein the water-insoluble ester is the reaction product of a polyol having the formula:



or



in which R is an alkyl group having 1 to 4 carbon atoms; m is 0 to 3 and n is 0 to 4; and a branched or straight chain fatty acid having between 12 and 30 carbon atoms.

32. (withdrawn) A method according to claim 31, wherein the alcohol is selected from the group consisting of ethylene glycol, propylene glycol, glycerol, neopentyl glycol, trimethylolethane and trimethylolpropane.

33. (withdrawn) A method according to claim 31, wherein the ester is a monoester, a diester or a polyester.

34. (withdrawn) A method according to claim 26, wherein the first and/or second spin finish comprises at least one water-insoluble ester of glycerol and at least one saturated or unsaturated fatty acid residue having 12-24 carbon atoms.

35. (withdrawn) A method according to claim 26, wherein the first and/or second spin finish comprises at least one water-insoluble ester in the form of a monoester of a fatty acid having 14-18 carbon atoms and a branched chain alcohol.

36. (withdrawn) A method according to claim 26, wherein the first and/or second spin finish comprises at least one water-insoluble ester of glycerol and at least one saturated or unsaturated fatty acid residue having 12-24 carbon atoms and at least one water-insoluble ester of neopentyl glycol and at least fatty acid residue having 12-24 carbon atoms.

37. (withdrawn) A method according to claim 26, wherein the antistatic agent is applied after crimping.

38. (withdrawn) A method according to claim 26, wherein the antistatic agent is anionic or nonionic.

39. (withdrawn) A method according to claim 26, wherein the antistatic agent has the formula $R^1R^2O_3PO^-M^+$, where R^1 and R^2 are independently selected from the group consisting of C_2 - C_{30} alkyl and polyether, and M^+ is an alkali metal ion, an ammonium ion or a proton.

40. (withdrawn) A method according to claim 26, wherein the antistatic agent has the formula $R^1R^2R^3O_3PO$, where R^1 , R^2 and R^3 are independently selected from the group consisting of methyl, C_2 - C_{30} alkyl and polyether.

41. (withdrawn) A method according to claim 26, wherein the first and/or second spin finish comprises 0.1-2% by weight (active ingredient content, based on the total active ingredient content) of a wetting agent.

42. (withdrawn) A method according to claim 26, wherein the first and/or second spin finish comprises 0.5-15% by weight (active ingredient content, based on the total active ingredient content) of a friction reducing additive comprising a wax or wax mixture and/or a polydiorganosiloxane.

43. (canceled).

44. (currently amended) A polyolefin-containing fiber carrying at its surface a hydrophobic finish comprising 0.01-1.0% by weight of the fiber of at least one water-insoluble ester of a mono-, di, tri- or tetrahydric alcohol with a molecular weight not exceeding 500 and a branched or straight chain fatty acid with between 12 and 30 carbon atoms where the water-insoluble ester is present at 35-65% and further comprising 35-65% of a mineral oil and 0.5-3% of an ethoxylated alcohol.

45. (canceled).

46. (previously presented) A method for producing a nonwoven material, the method comprising providing a web of fibres according to claim 44 and bonding the web to produce the nonwoven material.

47. (canceled).

48. (previously presented) A nonwoven material comprising fibres according to claim 44.

49. (canceled).

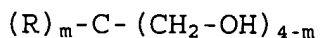
50. (previously presented) A composite material comprising a nonwoven material according to claim 48, wherein said nonwoven material is:

- a. laminated to a film layer or otherwise provided with a film coating; or
- b. bonded to or otherwise provided with a spunbonded layer or a layer of meltblown fibres.

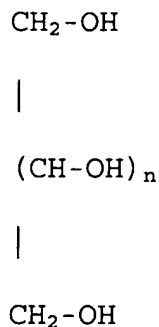
51. (previously presented) A fiber according to claim 44, wherein the fiber is a cardable staple fiber.

52. (previously presented) A polyolefin-containing fiber according to claim 44, consisting essentially of polypropylene, polyethylene or a copolymer thereof.

53. (previously presented) A fibre according to claim 44, wherein the water-insoluble ester is the reaction product of a polyol having the formula:



or



in which R is an alkyl group having 1 to 4 carbon atoms; m is 0 to 3 and n is 0 to 4;

with a branched or straight chain fatty acid having between 12 and 30 carbon atoms.

54. (previously presented) A fibre according to claim 53 wherein the polyol is selected from the group consisting of ethylene glycol, propylene glycol, glycerol, neopentyl glycol, trimethylolethane and trimethylolpropane.

55. (previously presented) A fiber according to claim 53, wherein the at least one of said ester is the reaction product of glycerol with at least one saturated or unsaturated fatty acid residue having 12-24 carbon atoms.

56. (previously presented) A fiber according to claim 44, wherein the at least one of said ester is a monoester and the

reaction product of a fatty acid having 14-18 carbon atoms with a branched chain alcohol.

57. (previously presented) A fiber according to claim 44 carrying at its surface

at least one water-insoluble ester comprising the reaction product of glycerol with at least one saturated or unsaturated fatty acid residue having 12-24 carbon atoms; and

at least one water-insoluble ester the reaction product of neopentyl glycol with at least fatty acid residue having 12-24 carbon atoms.

58. (previously presented) A fiber according to claim 44, further comprising an antistatic agent.

59. (previously presented) A fiber according to claim 58, wherein the antistatic agent is anionic or nonionic.

60. (previously presented) A fiber according to claim 58, wherein the antistatic agent has the formula $R^1R^2O_3PO^-M^+$, where R^1 and R^2 are independently selected from the group consisting of C_2 - C_{30} alkyl and polyether, and M^+ is an alkali metal ion, an ammonium ion or a proton.

61. (previously presented) A fiber according to claim 58, wherein the antistatic agent has the formula $R^1R^2R^3O_3PO$, where R^1 , R^2 and R^3 are independently selected from the group consisting of methyl, C_2 - C_{30} alkyl and polyether.

62. (previously presented) A fiber according to claim 44 further comprising a friction reducing additive comprising a wax or wax mixture and/or a polydiorganosiloxane.

63. (previously presented) A fiber according to claim 44, further comprising a mineral oil and an ethoxylated alcohol.

64. (currently amended) A fiber according to claim 44, having a hydrophobicity, as measured by the WRC test ~~as defined under the Methods section herein~~, corresponding to 10.21 to 27.74 cm for cut fibers 1 meter in length.

65. (currently amended) A non-woven material according to claim 48, having a hydrophobicity, as measured by the WRC test ~~as defined under the Methods section herein~~, corresponding to about 9 cm to about 10.5 cm at a basis weight of the non-woven material of 23 g/cm².

66. (withdrawn) A polyolefin-containing fiber produced by a method comprising the following steps:

- a. melt spinning a polyolefin-containing material to produce spun filaments,
- b. applying to the spun filaments a first spin finish with an active ingredient content comprising 20-100% by weight of at least one water-insoluble ester of a mono-, di-, tri- or tetrahydric alcohol with a molecular weight not exceeding 500 and a branched or straight chain fatty acid with between 12 and 30 carbon atoms,
- c. stretching the filaments,
- d. applying to the stretched filaments a second spin finish with an active ingredient content comprising 20-100% by weight of at least one water-insoluble ester of a mono-, di-, tri- or tetrahydric alcohol with a molecular weight not exceeding 500 and a branched or straight chain fatty acid with between 12 and 30 carbon atoms,
- e. optionally, crimping the filaments,
- f. applying, during the spinning stage, the stretching stage or after crimping, an antistatic agent,
- g. drying the filaments, and
- h. cutting the filaments to obtain staple fibers.

67. (withdrawn) A fiber according to claim 66, wherein the fiber is a cardable staple fiber.

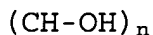
68. (withdrawn) A polyolefin-containing fiber according to claim 66, consisting essentially of polypropylene, polyethylene or a copolymer thereof.

69. (withdrawn) A fiber according to claim 66, wherein the water insoluble ester is the reaction product of a polyol having the formula:

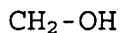


or CH_2-OH

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in which R is an alkyl group having 1 to 4 carbon atoms; m is 0 to 3 and n is 0 to 4;

with a branched or straight chain fatty acid having between 12 and 30 carbon atoms.

70. (withdrawn) A fiber according to claim 53, wherein the polyol is selected from the group consisting of ethylene glycol, propylene glycol, glycerol, neopentyl glycol, trimethylolethane and trimethylolpropane.

71. (withdrawn) A fiber according to claim 53, wherein at least one of said ester is the reaction product of glycerol with at least one saturated or unsaturated fatty acid residue having 12-24 carbon atoms.

72. (withdrawn) A fiber according to claim 43, wherein at least one of said ester is a monoester and the reaction product of a fatty acid having 14-18 carbon atoms with a branched chain alcohol.

73. (withdrawn) A fiber according to claim 43, carrying at its surface at least one water-insoluble ester comprising the reaction product of glycerol with at least one saturated or unsaturated fatty acid residue having 12-24 carbon atoms; and at least one water-insoluble ester reaction product of neopentyl glycol with at least fatty acid residue having 12-24 carbon atoms.

74. (withdrawn) A fiber according to claim 66, further comprising an antistatic agent.

75. (withdrawn) A fiber according to claim 74, wherein the antistatic agent is anionic or nonionic.

76. (withdrawn) A fiber according to claim 74, wherein the antistatic agent has the formula $R^1R^2O_3PO^-M^+$, where R^1 and R^2 are independently selected from the group consisting of C_2 - C_{30} alkyl and polyether, and M^+ is an alkali metal ion, an ammonium ion or a proton.

77. (withdrawn) A fiber according to claim 74, wherein the antistatic agent has the formula $R^1R^2O_3PO^-M^+$, where R^1 and R^2 and R^3 are independently selected from the group consisting of methyl, C_2 - C_{30} alkyl and polyether.

78. (withdrawn) A fiber according to claim 66, further comprising a friction reducing additive comprising a wax or wax mixture and/or a polydiorganosiloxane.

79. (withdrawn) A fiber according to claim 66, further comprising a mineral oil and an ethoxylated alcohol.

80. (withdrawn - currently amended) A fiber according to claim 66, having a hydrophobicity, as measured by the WRC test ~~as defined under the Methods section herein~~, corresponding to at least 5 cm for cut fibers 1 meter in length.

81. (withdrawn - currently amended) A non-woven material comprising fibers according to claim 66, having a hydrophobicity as measured by the WRC test ~~as defined under the Methods section herein~~, corresponding to at least 9 cm at a basis weight of the non-woven material of 23 g/cm².

82. (withdrawn) A method for producing a non-woven material, the method comprising providing a web of fibers according to claim 66 and bonding the web to produce the non-woven material.

83. (withdrawn) A non-woven material comprising fibers according to claim 66.

84. (withdrawn) A composite material comprising a non-woven material according to claim 83, wherein said non-woven material is:

- a. laminated to a film layer or otherwise provided with a film coating; or

- b. bonded to or otherwise provided with a spunbonded layer of melt blown fibers.